

MS43-01 | HIDDEN VACANCY-NETWORK POLYMORPHISM OF PRUSSIAN BLUE ANALOGUES

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Prussian Blue analogues (PBAs) are an important and broad family of materials, with applications in e.g. catalysis, energy, proton conduction, and gas storage. The vast majority of PBAs are defective materials that contain a very large fraction of transition-metal vacancies; these vacancies in turn connect to form extended micropore networks. We have used 3D total scattering measurements to characterise the nature of these disordered pore networks in a variety of PBAs. This talk will present our results, and demonstrate how PBA composition and synthesis approach allow for correlated defect engineering in PBAs as a means of controlling storage capacity, anisotropy, and transport efficiency.